

## Rosmarinic acid

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**Rosmarinic acid**,  $C_{18}H_{16}O_8$ , is a natural polyphenol antioxidant carboxylic acid found in many *Lamiaceae* herbs used commonly as culinary herbs such as lemon balm, rosemary, oregano, sage, thyme and peppermint.<sup>[1]</sup> Chemically, rosmarinic acid is an ester of caffeic acid with 3,4-dihydroxyphenyl lactic acid. It is a red-orange powder that is slightly soluble in water, but well soluble in most organic solvents.<sup>[2]</sup>

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### Biological importance

Because of the antioxidant activity of *Lamiaceae* herbs in laboratory test models they have been suggested to have beneficial effects in humans.<sup>[3]</sup>

### Metabolism

Rosmarinic acid is known to undergo metabolism in humans and rats to methylated rosmarinic acid, coumaric acid, ferulic acid and caffeic acid.

### References

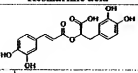
- ↑ Clifford, M.N. Chlorogenic acids and other cinnamates. Nature, occurrence and dietary burden. *J. Sci. Food. Agric.* (79) 362-372, 1999
- ↑ MSDS for rosmarinic acid
- ↑ Tristramphyllou, K.; Bilekas, G.; Boskou, D. Antioxidative properties of water extracts obtained from herbs of the species *Lamiaceae*. *Int. J. Food. Sci. Nutr.* (52) 313-317, 2001

### See also

- Caffeic acid
- Coumaric acid
- Ferulic acid

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Categories: Antioxidants | Carboxylic acids | Phenols | Phenylpropanoids

Rosmarinic acid	
	
IUPAC name	(2 <i>H</i> )-2-[(2 <i>E</i> )-3-(3,4-Dihydroxyphenyl)-1-oxo-2-propenyl]oxy]-3-(3,4-dihydroxyphenyl)propanoic acid
<b>Identifiers</b>	
CAS number	537-15-5
PubChem	5281792
SMILES	<div> <div> OC1=CC=C(C=C1)C(=O)C(C=C1)C(=O)OC2=CC(=C(C=C2)O)C(=O)O</div> <div></div> </div>
<b>Properties</b>	
Molecular formula	$C_{18}H_{16}O_8$
Molar mass	360.31 g/mol
Melting point	171-175 °C
Except where noted otherwise, data are given for materials in their standard state (at 25 °C, 100 kPa)	
Infobox references	

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